

## **REMARKS**

Applicant is in receipt of the Office Action mailed August 3, 2009. Claim 31 is herein canceled. Claims 49, 51 and 52 are herein amended.

### **Claim Objections**

The Examiner objected to claims 51 and 52 for depending on a canceled claim (i.e., on claim 3). Claim 51 and 52 have each been amended to correct their dependency.

### **Art-Based Rejections**

The pending claims were rejected under 35 U.S.C. 103(a) as being unpatentable in view of various combinations of:

Gorell et al. ("Trends in Reservoir Simulation: Big Models, Scalable Models? Will You Please Make Up Your Mind")

Netemeyer et al. (U.S. Pub. No. 2002/0169785);

Voit et al. ("Random Number Generation from Right-Skewed, Symmetric, and Left-Skewed Distributions", Risk Analysis, Vol. 20, No. 1, 2000);

Jalali et al. (U.S. Pub. No. 2002/0177955 A1);

Begg et al. ("Improving Investment Decisions Using a Stochastic Integrated Asset Model, SPE 71414, SPE Annual Technical Conference and Exhibition, 9/2001);

Egyed ("A Scenario-Driven Approach to Traceability", IEEE, 2001);

Joshi et al. (Techno-Economic and Risk Evaluation of a Thermal Recovery Project, March 1996, Prepared for Department of Energy).

In particular, claims 1, 13, 15-16, 49 and 51-52 were rejected based on Gorell in view of Netemeyer. Claims 7 and 9 were rejected based on Gorell in view of Netemeyer and Voit. Claim 10 was rejected based on Gorell in view of Netemeyer and Voit. Claims 17-21, 25 and 27-30 were rejected based on Gorell in view of Netemeyer and Jalali. Claim 23 was rejected based on Gorell in view of Netemeyer, Jalali and Begg. Claim 24 was rejected based on Gorell in view of Netemeyer, Jalali and Voit. Claim 31 was rejected based on Gorell and Egyed. Claims 42, 45 and 48 were rejected based on Gorell in view of Netemeyer, Jalali and Begg. Claims 50 and 53 were rejected based on Gorell in view

of Netemeyer and Joshi. Applicant respectfully traverses these rejections based on the following reasoning.

Gorell teaches that “[r]unning a reservoir simulation for each iteration **is not practical** so equations are used as a surrogate for the simulator.” (Emphasis added) (Gorell page 10, left column, last paragraph.) In contrast, claim 1 explicitly recites the following combination of features:

“executing the one or more simulation engines on the workflow”;

“wherein the one or more simulation engines include one or more physics-based flow simulators for simulating reservoirs, wells and surface-pipeline hydraulics”

“repeatedly performing said selecting, said assembling the instantiated models, said executing and said storing”.

Thus, the claimed method requires that the claimed “one or more physics-based flow simulators” be executed each time the claimed “selecting” (of values of the variables) is performed. Therefore, one of ordinary skill would have absolutely no motivation to modify Gorell’s system to make it capable of executing “one or more physics-based flow simulators” in each repetition of the claimed “repeatedly performing”.

Claim 1 and its dependents are believed to be patentably distinct over the cited references at least for the reason given above. Claims 10, 13, 17, 19, 21, 42 and 48 each recite features similar to those recited above with respect to claim 1. Thus, these claims and their dependents are believed to be patentably dependent over the cited references.

## CONCLUSION

In light of the foregoing amendments and remarks, Applicant submits the application is now in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above-referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. The Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to Meyertons, Hood, Kivlin, Kowert & Goetzel P.C., Deposit Account No. 50-1505/5460-01101/JCH.

Also filed herewith are the following items:

- ☐ Request for Continued Examination
- ☐ Terminal Disclaimer
- ☐ Power of Attorney By Assignee and Revocation of Previous Powers
- ☐ Notice of Change of Address
- ☐ Other:

Respectfully submitted,

/Jeffrey C. Hood/

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